

What is n-propyl bromide, and why is EPA regulating it?

n-propyl bromide (nPB), also called 1-bromopropane, is a non-flammable organic solvent with a strong odor. Its Chemical Abstracts Service Registry Number (CASRN) is 106-94-5. It is used to remove solder flux, wax, oil, and grease from electronics parts, metals, and other materials. In addition, nPB is used as a solvent in adhesive formulation. Some brand name products using nPB in their formulas include Abzol®, EnSolv®, and Solvon® cleaners, as well as Whisper Spray® and fire retardant Soft Seam adhesives.

EPA is evaluating nPB's effects on human health and the environment under the SNAP Program to determine if it is safer than the ozone-depleting substances (ODS) it replaces and other available solvents. In particular, EPA proposes to allow the use of nPB as a substitute for ODS with certain conditions because of its toxicity and potential health effects on people who are exposed to it.

EPA's Proposed Regulation of n-Propyl Bromide

Through its Significant New Alternatives Policy (SNAP) Program, the U.S. Environmental Protection Agency (EPA) is proposing to allow the use of n-propyl bromide (nPB) as a chemical alternative to ozone-depleting substances (ODS) with certain conditions. The SNAP Program thoroughly studies alternatives, such as nPB, to ensure that the use of replacement chemicals will not pose significant risk to human health and to the environment. This fact sheet answers some commonly asked questions about EPA's proposed regulations on the appropriate use of nPB.

How does EPA propose to regulate the use of n-propyl bromide (nPB)?

EPA proposes to list nPB as a chemical acceptable for use as:

- A solvent for metal cleaning, electronics cleaning, and precision cleaning;
- An aerosol solvent; and
- A carrier solvent in adhesives.

EPA also proposes that nPB used for these purposes contains no more than 0.05 percent isopropyl bromide (also called 2-bromopropane, CASRN 75-26-3) by weight before it is combined with other chemicals.

What are the environmental impacts of nPB?

At the latitude of the U.S., nPB has an ozone depletion potential (ODP) of 0.013 to 0.018, much lower than that of the ODS that it would replace—CFC-113, methyl chloroform, and HCFC-141b. At tropical latitudes, nPB has an ODP of 0.07 to 0.10,

close to that of methyl chloroform and HCFC-141b. EPA is basing its proposed decision on the ODP in the United States.

nPB has a low global warming potential (GWP) of 0.31 compared to a value of 1 for CO₂ over 100 years. nPB may contribute to smog and is currently regulated as a volatile organic compound (VOC).

What is the recommended exposure level of nPB in the workplace?

EPA recommends that individuals inhale no more than an average of 25 parts per million (ppm) of nPB during an eight-hour workday.

How did EPA develop an exposure limit for nPB?

EPA based its proposed exposure limit on information drawn from several toxicological studies, including those that reveal nPB's effects on the liver, central nervous system, and reproductive system of test animals.



How does EPA's recommended exposure limit for nPB compare to industry standards and regulatory requirements?

To date, the Occupational Safety and Health Administration (OSHA) has not issued a Permissible Exposure Limit (PEL) for nPB. At OSHA's request, the National Toxicology Program will perform a number of studies on the effects of nPB. When these studies are completed (studies could take several years), EPA anticipates that OSHA will set a mandatory nPB workplace exposure limit. An OSHA PEL would supersede EPA's recommended workplace exposure limit.

Similarly, the National Institute for Occupational Safety and Health (NIOSH), the American Industrial Hygiene Association (AIHA), and the American Conference of Governmental Industrial Hygienists (ACGIH) have not yet established a workplace exposure limit for nPB. The exposure limit being developed by AIHA or ACGIH may differ from EPA's proposed valuation; however, these organizations will consider seriously EPA's recommendation.

Where can I find a copy of EPA's proposed rule?

EPA's proposed nPB regulations were published in the *Federal Register* on June 3, 2003. The proposed rule can be downloaded from the Federal Register Website at <http://www.gpoaccess.gov/fr/index.html> or from EPA's SNAP Program Website at <http://www.epa.gov/ozone/snap>. The name of the proposed rule is: "Protection of Stratospheric Ozone: Listing of Substitutes for Ozone-Depleting Substances—n-Propyl Bromide."

How can I access EPA's information related to nPB?

EPA maintains information on nPB in a public file, which can be accessed by:

- Visiting the EPA Docket Center Public Reading Room, Room B102, at 1301 Constitution Avenue, NW, Washington, DC;
- Calling (202) 566-1742 and requesting copies of items in Docket #A-2001-07 (there is a charge of 15 cents per page); or
- Visiting EPA's Website at <http://www.epa.gov/edocket> to access public comments or materials available in the electronic docket (OAR-2002-0064).

When will EPA issue a final ruling on nPB?

EPA hopes to issue a final rule in 2004. The actual issue date is dependent on the number and complexity of issues raised by the public in response to the proposed rule.

How and where should I send public comments on EPA's proposed rule?

Public comments should be forwarded to EPA's Air Docket (OAR-2002-0064). To ensure that your comments are considered, please submit all comments by August 4, 2003, the close of the public comment period.

For more information on EPA's proposed rule on nPB:

Contact

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Email: sheppard.margaret@epa.gov

Visit EPA Website

<http://www.epa.gov/ozone/snap>

Review EPA Docket

Electronic documents are in EPA Docket OAR-2002-0064, which is available at <http://www.epa.gov/edocket>.

Hard copies of documents in Docket A-2001-07 may also be obtained at:

1301 Constitution Avenue, NW
Room B102
Washington, DC
Tel: (202) 566-1742

EPA welcomes comments on the proposed rule. Please send comments to:

Mail

U.S. EPA
Air & Radiation Docket, Mail Code 6102T
Attention: Docket OAR-2002-0064
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Fax

(202) 566-1741

Email

A-And-R-Docket@epa.gov

Internet

Submit electronically to Docket OAR-2002-0064 at <http://www.epa.gov/edocket>.

